GenCore version 5.1.4_p5_4578

OM protein - protein search, using sw model

Run on: March 24, 2003, 15:45:24 ; Search time 11.8788 Seconds
(without alignments)
628.181 Million cell updates/sec

Title: US-09-988-971-2_COPY_35_90
Perfect score: 288
Sequence: 1 ATAVALGSFPAGGPAELSLR.....VLSEVSGREYNIPSVHVAKV 56

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_101002:*
1: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
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22: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
23: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	288	100.0	210	23	AAO15458	Mouse modulator of
2	288	100.0	261	23	AAO15457	Human modulator of
3	284	98.6	248	21	AAB42993	Human ORFX ORF2757
4	284	98.6	261	23	AAU91308	Human protein NOV1
5	242	84.0	259	23	AAO15456	Mouse modulator of
6	148	51.4	70	22	ABG05994	Novel human diagno
7	145	50.3	395	22	AAU31598	Novel human secret
8	99	34.4	315	22	AAU31072	Novel human secret
9	96	33.3	509	21	AAY49420	PKA substrate, Src
10	91.5	31.8	517	22	ABB57957	Drosophila melanog
11	90	31.2	61	23	ABB84051	Human protein frag
12	90	31.2	471	23	ABB84052	Rat/human fusion p
13	90	31.2	505	22	AAB99332	Human tyrosine kin
14	90	31.2	513	23	ABB84055	Rat/human fusion p
15	89.5	31.1	2415	22	ABB58710	Drosophila melanog
16	88	30.6	126	20	AAW73554	Lymphoid cell prot
17	88	30.6	346	21	AAY76750	Human protein kina
18	88	30.6	346	22	AAE06208	Human protein kina
19	88	30.6	508	21	AAB37700	Human lymphocyte k
20	87.5	30.4	60	17	AAW07876	Residues 81-140 of
21	87.5	30.4	251	21	AAY44450	Mutant chicken c-S
22	87.5	30.4	533	14	AAR39705	Chicken pp60 c-src
23	87.5	30.4	533	21	AAY44447	Wild-type chicken
24	87.5	30.4	533	21	AAY44449	Mutant chicken c-S
25	87.5	30.4	533	21	AAY44451	Mutant chicken c-S
26	87.5	30.4	533	22	AAB84661	Amino acid sequenc
27	85.5	29.7	211	22	AAB36685	Mammalian two-hybr
28	85.5	29.7	214	22	AAB36681	Mammalian two-hybr
29	85.5	29.7	536	14	AAR39706	Human pp60 c-src p
30	85.5	29.7	536	23	AAU78678	Human SH2/SH3 doma
31	85	29.5	116	22	AAU31071	Novel human secret
32	84.5	29.3	543	20	AAY24421	Human yes1 protein
33	84.5	29.3	543	22	ABG10302	Novel human diagno
34	84.5	29.3	543	22	AAB84663	Amino acid sequenc
35	82.5	28.6	541	23	AAU74614	Perinuclear theca
36	82.5	28.6	542	23	ABB97339	Novel human protei
37	82.5	28.6	565	22	ABG23778	Novel human diagno
38	82	28.5	59	20	AAY29669	Human src-family k
39	82	28.5	59	22	AAU08731	Src-family kinase
40	82	28.5	496	20	AAY29668	Human src-family k
41	82	28.5	496	22	AAU08730	Xenopus laevis src
42	82	28.5	496	22	AAU08734	Xenopus laevis src
43	82	28.5	496	22	AAU08735	Xenopus laevis src
44	80.5	28.0	1200	21	AAB19313	Amino acid sequenc
45	80	27.8	1683	21	AAY71160	Rat phosphodiester

ALIGNMENTS

RESULT 1
AAO15458
ID AAO15458 standard; Protein; 210 AA.
XX
AC AAO15458;
XX
DT 03-OCT-2002 (first entry)
XX
DE Mouse modulator of antigen receptor signalling short isoform protein.
XX
KW Mouse; gene therapy; modulator of antigen receptor signalling; MARS;
KW tumour suppressor gene; Scr-like adaptor protein; SLAP;
KW myeloid malignancy; acute myelogenous leukaemia; autoimmune disorder;
KW immunosuppression; myeloproliferative disorder; breast cancer.
XX
OS Mus sp.
XX
PN WO200242452-A2.
XX
PD 30-MAY-2002.
XX
PF 26-NOV-2001; 2001WO-CA01662.
XX
PR 27-NOV-2000; 2000CA-2324663.
XX
PA (HOSP-) HOSPITAL FOR SICK CHILDREN.
XX
PI Mcglade JC, Loreto MP;
XX
DR WPI; 2002-566564/60.
DR N-PSDB; AAL44090.
XX
PT New isolated modulator of antigen receptor signaling protein or its

PT fragment, useful for treating malignant disorders such as myeloid
PT malignancies, autoimmune disorders and myeloproliferative disorders -
XX
PS Claim 8; Page 78; 110pp; English.
XX
CC The invention comprises the amino acid and coding sequences of modulator
CC of antigen receptor signalling (MARS) proteins. The MARS protein is a
CC putative tumour suppressor gene and exhibits structural and sequence
CC similarity to the Scr-like adaptor protein (SLAP). The MARS DNA and
CC protein sequences of the invention are useful for the treatment of
CC myeloid malignancies (e.g. acute myelogenous leukaemia) autoimmune
CC disorders, immunosuppression, myeloproliferative disorders and
CC malignancies related to the de-regulation of tyrosine kinases (e.g.
CC breast cancer). The present amino acid sequence represents a mouse MARS
CC protein.
XX
SQ Sequence 210 AA;

Query Match 100.0%; Score 288; DB 23; Length 210;
Best Local Similarity 100.0%; Pred. No. 1.6e-29;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATAVALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 35 ATAVALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 90

RESULT 2
AAO15457
ID AAO15457 standard; Protein; 261 AA.
XX
AC AAO15457;
XX
DT 03-OCT-2002 (first entry)
XX
DE Human modulator of antigen receptor signalling (MARS) protein.
XX
KW Human; gene therapy; modulator of antigen receptor signalling; MARS;
KW tumour suppressor gene; Scr-like adaptor protein; SLAP;
KW myeloid malignancy; acute myelogenous leukaemia; autoimmune disorder;
KW immunosuppression; myeloproliferative disorder; breast cancer.
XX
OS Homo sapiens.
XX
PN WO200242452-A2.
XX
PD 30-MAY-2002.
XX
PF 26-NOV-2001; 2001WO-CA01662.
XX
PR 27-NOV-2000; 2000CA-2324663.
XX
PA (HOSP-) HOSPITAL FOR SICK CHILDREN.
XX
PI Mcglade JC, Loreto MP;
XX
DR WPI; 2002-566564/60.
DR N-PSDB; AAL44089.
XX
PT New isolated modulator of antigen receptor signaling protein or its
PT fragment, useful for treating malignant disorders such as myeloid
PT malignancies, autoimmune disorders and myeloproliferative disorders -
XX
PS Claim 7; Fig 9A; 110pp; English.
XX
CC The invention comprises the amino acid and coding sequences of modulator
CC of antigen receptor signalling (MARS) proteins. The MARS protein is a
CC putative tumour suppressor gene and exhibits structural and sequence
CC similarity to the Scr-like adaptor protein (SLAP). The MARS DNA and
CC protein sequences of the invention are useful for the treatment of
CC myeloid malignancies (e.g. acute myelogenous leukaemia) autoimmune
CC disorders, immunosuppression, myeloproliferative disorders and
CC malignancies related to the de-regulation of tyrosine kinases (e.g.
CC breast cancer). The present amino acid sequence represents a human MARS
CC protein.
XX
SQ Sequence 261 AA;

Query Match 100.0%; Score 288; DB 23; Length 261;
Best Local Similarity 100.0%; Pred. No. 2.1e-29;
Matches 56; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 ATAVALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 35 ATAVALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 90

RESULT 3
AAB42993
ID AAB42993 standard; Protein; 248 AA.
XX
AC AAB42993;
XX
DT 08-FEB-2001 (first entry)
XX
DE Human ORFX ORF2757 polypeptide sequence SEQ ID NO:5514.
XX
KW Human; open reading frame; ORFX; detection; cytostatic; hepatotropic;
KW vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
KW anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
KW immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
KW hypotensive; dermatological; immunosuppressive; antiinflammatory;
KW antiviral; antibacterial; antifungal; antirheumatic; antithyroid;
KW antianaemic; gene therapy; cancer; proliferative disorder; hypertension;
KW neurodegenerative disorder; osteoarthritis; graft vs host disease;
KW cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;
KW cholesterol ester storage; systemic lupus erythematosus; infection;
KW severe combined immunodeficiency; malaria; autoimmune disorder; asthma;
KW allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
KW bone damage; cartilage damage; antiinflammatory disease; coagulation;
KW thrombosis; contraceptive.
XX
OS Homo sapiens.
XX
PN WO200058473-A2.
XX
PD 05-OCT-2000.
XX
PF 31-MAR-2000; 2000WO-US08621.
XX
PR 31-MAR-1999; 99US-0127607.
PR 02-APR-1999; 99US-0127636.
PR 05-APR-1999; 99US-0127728.
PR 30-MAR-2000; 2000US-0540763.
XX
PA (CURA-) CURAGEN CORP.
XX
PI Shimkets RA, Leach M;
XX
DR WPI; 2000-602362/57.
DR N-PSDB; AAC77202.
XX
PT Novel nucleic acids and peptides derived from open reading frame X,
PT useful for treating e.g. cancers, proliferative disorders,
PT neurodegenerative disorders and cardiovascular disease -
XX
PS Claim 11; Page 4693-4694; 5507pp; English.
XX
CC AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397,
CC which represent the human ORFX open reading frames 1 to 3161. The ORFX
CC sequences have activities such as: cytostatic; hepatotropic; vulnerary;
CC antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
CC osteopathic; anticonvulsant; antiarthritic; immunosuppressant;
CC immunostimulant; cardiant; thrombolytic; coagulant; vasotropic;
CC antidiabetic; hypotensive; dermatological; immunosuppressive;
CC antiinflammatory; antibacterial; antiviral; antifungal; antirheumatic;

CC antithyroid; and antianaemic. The sequences can be used for determining
CC the presence of or predisposition to, or preventing or treating
CC pathological conditions associated with an ORFX-associated disorder. The
CC nucleic acids can be used to express ORFX proteins in gene therapy
CC vectors. The proteins and nucleic acids may be used to treat cancers,
CC proliferative disorders, neurodegenerative disorders, osteoarthritis,
CC graft vs host disease, cardiovascular disease, diabetes mellitus,
CC hypertension, hypothyroidism, cholesterol ester storage, systemic lupus
CC erythematosus, severe combined immunodeficiency (SCID), AIDS, viral,
CC bacterial or fungal infection, malaria, autoimmune disorders, asthma,
CC allergies, aplastic anaemia, burns, wounds, bone and cartilage damage,
CC nocturnal haemoglobinuria, antiinflammatory disease; to enhance
CC coagulation; to inhibit thrombosis; and as a contraceptive.
XX
SQ Sequence 248 AA;

Query Match 98.6%; Score 284; DB 21; Length 248;
Best Local Similarity 98.2%; Pred. No. 6.6e-29;
Matches 55; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ATAVALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
||| ||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 22 ATAAALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 77

RESULT 4
AAU91308
ID AAU91308 standard; Protein; 261 AA.
XX
AC AAU91308;
XX
DT 18-JUN-2002 (first entry)
XX
DE Human protein NOV13.
XX
KW Human; NOVX; gene therapy; cardiomyopathy; atherosclerosis;
KW cell signal processing disorder; metabolic pathway modulation disorder;
KW diabetes; cancer; adenocarcinoma; lymphoma; prostate cancer;
KW uterus cancer; immune response; graft-versus-host disease;
KW acquired immunodeficiency syndrome; AIDS; asthma; Crohn's disease;
KW hypertension; congenital heart defects; multiple sclerosis; inflammation;
KW Albright hereditary osteodystrophy.
XX
OS Homo sapiens.
XX
PN WO200216599-A2.
XX
PD 28-FEB-2002.
XX
PF 27-AUG-2001; 2001WO-US26510.
XX
PR 25-AUG-2000; 2000US-228191P.
PR 08-FEB-2001; 2001US-267300P.
PR 20-FEB-2001; 2001US-269961P.
PR 20-MAR-2001; 2001US-277337P.
XX
PA (CURA-) CURAGEN CORP.
PA (CORT-) COR THERAPEUTICS INC.
XX
PI Burgess CE, Conley PB, Grosse WM, Hart M, Kekuda R, Shimkets RA;
PI Spytek KA, Szekeres ES, Tomlinson JE, Topper JN, Yang R;
XX
DR WPI; 2002-280937/32.
DR N-PSDB; ABK61465.
XX
PT New polypeptides for treating or preventing a disorder associated with
PT them, in humans, e.g. cardiomyopathy, atherosclerosis or cancers -
XX
PS Claim 3; Page 98; 263pp; English.
XX
CC The invention relates to an isolated polypeptide (NOVX) a mature
CC form of NOVX, a NOVX variant (differing by no more than 15%), the
CC nucleotide encoding NOVX (or its complement, fragment or variant).
CC NOVX is NOV1-14, 15a, 15b, 16a, and 16b. The NOVX polypeptide, nucleic
CC acid encoding it and antibody against it, are useful for treating or
CC preventing (e.g. by gene therapy) a NOVX-associated disorder in humans,
CC e.g. cardiomyopathy, atherosclerosis, a disorder related to cell signal
CC processing and metabolic pathway modulation, diabetes or cancers. The
CC NOVX polypeptide and nucleic acids are also useful for determining the
CC presence of predisposition to the diseases. The NOVX nucleic acid and
CC polypeptide are especially useful in therapeutic or prophylactic
CC applications for disorders associated with aberrant NOVX expression or
CC activity, e.g. cancers (e.g. adenocarcinoma, lymphoma, prostate cancer or
CC uterus cancer), immune response, graft-versus-host disease, acquired
CC immunodeficiency syndrome (AIDS), asthma, Crohn's disease, hypertension,
CC congenital heart defects, multiple sclerosis, inflammation or Albright
CC hereditary osteodystrophy and many other diseases listed in the
CC specification. The DNA encoding the protein is useful in gene therapy
CC for treating the conditions. This is also useful in detection assays,
CC chromosome mapping, tissue typing, diagnostic or prognostic assays, or
CC for developing a powerful assay system for functional analysis of
CC various human disorders, as well as in diagnostic applications. The
CC present sequence represents a NOVX protein.
XX
SQ Sequence 261 AA;

Query Match 98.6%; Score 284; DB 23; Length 261;
Best Local Similarity 98.2%; Pred. No. 7.1e-29;
Matches 55; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 ATAVALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
|||||||||||||||||||||||||||||||||||||||||||||||||||| ||
Db 35 ATAVALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVGKV 90

RESULT 5
AAO15456
ID AAO15456 standard; Protein; 259 AA.
XX
AC AAO15456;
XX
DT 03-OCT-2002 (first entry)
XX
DE Mouse modulator of antigen receptor signalling (MARS) protein.
XX
KW Mouse; gene therapy; modulator of antigen receptor signalling; MARS;
KW tumour suppressor gene; Scr-like adaptor protein; SLAP;
KW myeloid malignancy; acute myelogenous leukaemia; autoimmune disorder;
KW immunosuppression; myeloproliferative disorder; breast cancer.
XX
OS Mus sp.
XX
PN WO200242452-A2.
XX
PD 30-MAY-2002.
XX
PF 26-NOV-2001; 2001WO-CA01662.
XX
PR 27-NOV-2000; 2000CA-2324663.
XX
PA (HOSP-) HOSPITAL FOR SICK CHILDREN.
XX
PI Mcglade JC, Loreto MP;
XX
DR WPI; 2002-566564/60.
DR N-PSDB; AAL44087.
XX
PT New isolated modulator of antigen receptor signaling protein or its
PT fragment, useful for treating malignant disorders such as myeloid
PT malignancies, autoimmune disorders and myeloproliferative disorders -
XX
PS Claim 7; Fig 1A; 110pp; English.
XX
CC The invention comprises the amino acid and coding sequences of modulator
CC of antigen receptor signalling (MARS) proteins. The MARS protein is a
CC putative tumour suppressor gene and exhibits structural and sequence

```
CC   similarity to the Scr-like adaptor protein (SLAP). The MARS DNA and
CC   protein sequences of the invention are useful for the treatment of
CC   myeloid malignancies (e.g. acute myelogenous leukaemia) autoimmune
CC   disorders, immunosuppression, myeloproliferative disorders and
CC   malignancies related to the de-regulation of tyrosine kinases (e.g.
CC   breast cancer). The present amino acid sequence represents a mouse MARS
CC   protein.
XX
SQ   Sequence   259 AA;

  Query Match             84.0%;  Score 242;  DB 23;  Length 259;
  Best Local Similarity   85.5%;  Pred. No. 2.2e-23;
  Matches   47;  Conservative    4;  Mismatches    4;  Indels    0;  Gaps    0;

Qy       2 TAVALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
           |||||||||||  | ||||||||||:|||||||| ||||||||::|||:||||
Db      35 TAVALGSFPAGEQARLSLRLGEPLTIISEDGDWWTVQSEVSGREYHMPSVYVAKV 89


RESULT 6
ABG05994
ID   ABG05994 standard; Protein; 70 AA.
XX
AC   ABG05994;
XX
DT   13-FEB-2002  (first entry)
XX
DE   Novel human diagnostic protein #5985.
XX
KW   Human; chromosome mapping; gene mapping; gene therapy; forensic;
KW   food supplement; medical imaging; diagnostic; genetic disorder.
XX
OS   Homo sapiens.
XX
PN   WO200175067-A2.
XX
PD   11-OCT-2001.
XX
PF   30-MAR-2001; 2001WO-US08631.
XX
PR   31-MAR-2000; 2000US-0540217.
PR   23-AUG-2000; 2000US-0649167.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Drmanac RT,  Liu C,  Tang YT;
XX
DR   WPI; 2001-639362/73.
DR   N-PSDB; AAS70181.
XX
PT   New isolated polynucleotide and encoded polypeptides, useful in
PT   diagnostics, forensics, gene mapping, identification of mutations
PT   responsible for genetic disorders or other traits and to assess
PT   biodiversity  -
XX
PS   Claim 20; SEQ ID No 36353; 103pp; English.
XX
CC   The invention relates to isolated polynucleotide (I) and
CC   polypeptide (II) sequences. (I) is useful as hybridisation probes,
CC   polymerase chain reaction (PCR) primers, oligomers, and for chromosome
CC   and gene mapping, and in recombinant production of (II). The
CC   polynucleotides are also used in diagnostics as expressed sequence tags
CC   for identifying expressed genes. (I) is useful in gene therapy techniques
CC   to restore normal activity of (II) or to treat disease states involving
CC   (II). (II) is useful for generating antibodies against it, detecting or
CC   quantitating a polypeptide in tissue, as molecular weight markers and as
CC   a food supplement. (II) and its binding partners are useful in medical
CC   imaging of sites expressing (II). (I) and (II) are useful for treating
CC   disorders involving aberrant protein expression or biological activity.
CC   The polypeptide and polynucleotide sequences have applications in
CC   diagnostics, forensics, gene mapping, identification of mutations
CC   responsible for genetic disorders or other traits to assess biodiversity
CC   and to produce other types of data and products dependent on DNA and
CC   amino acid sequences. ABG00010-ABG30377 represent novel human
CC   diagnostic amino acid sequences of the invention.
CC   Note: The sequence data for this patent did not appear in the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence   70 AA;

  Query Match             51.4%;  Score 148;  DB 22;  Length 70;
  Best Local Similarity   96.4%;  Pred. No. 8.4e-12;
  Matches   27;  Conservative    1;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      29 SEDGDWWTVLSEVSGREYNIPSVHVAKV 56
           |:|||||||||||||||||||||||||||
Db       6 SKDGDWWTVLSEVSGREYNIPSVHVAKV 33


RESULT 7
AAU31598
ID   AAU31598 standard; Protein; 395 AA.
XX
AC   AAU31598;
XX
DT   18-DEC-2001  (first entry)
XX
DE   Novel human secreted protein #2089.
XX
KW   Human; vaccination; gene therapy; nutritional supplement;
KW   stem cell proliferation; haematopoiesis; nerve tissue regeneration;
KW   immune suppression; immune stimulation; anti-inflammatory; leukaemia.
XX
OS   Homo sapiens.
XX
PN   WO200179449-A2.
XX
PD   25-OCT-2001.
XX
PF   16-APR-2001; 2001WO-US08656.
XX
PR   18-APR-2000; 2000US-0552929.
PR   26-JAN-2001; 2001US-0770160.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Drmanac RT;
XX
DR   WPI; 2001-611725/70.
XX
PT   Nucleic acids encoding a range of human polypeptides, useful in genetic
PT   vaccination, testing and therapy -
XX
PS   Claim 20; Page 464-465; 765pp; English.
XX
CC   The invention relates to novel human secreted polypeptides. The
CC   polypeptides and antibodies to the polypeptides are useful for
CC   determining the presence of or predisposition to a disease associated
CC   with altered levels of polypeptide. The polypeptides are also useful for
CC   identifying agents (agonists and antagonists) that bind to them. Cells
CC   expressing the proteins are useful for identifying a therapeutic agent
CC   for use in treatment of a pathology related to aberrant expression or
CC   physiological interactions of the polypeptide. Vectors comprising
CC   the nucleic acids encoding the polypeptides and cells genetically
CC   engineered to express them are also useful for producing the proteins.
CC   The proteins are useful in genetic vaccination, testing and
CC   therapy, and can be used as nutritional supplements. They may be used to
CC   increase stem cell proliferation; to regulate haematopoiesis; and in
CC   bone, cartilage, tendon  and/or nerve tissue growth or regeneration;
CC   immune suppression and/or stimulation; as anti-inflammatory agents; and
CC   in treatment of leukaemias. AAU29510-AAU33304 represent the amino acid
CC   sequences of novel human secreted proteins of the invention.
XX
SQ   Sequence   395 AA;
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  Query Match             50.3%;  Score 145;  DB 22;  Length 395;
  Best Local Similarity   100.0%;  Pred. No. 1.9e-10;
  Matches   30;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 ATAVALGSFPAGGPAELSLRLGEPLTIVSE 30
           ||||||||||||||||||||||||||||||
Db     366 ATAVALGSFPAGGPAELSLRLGEPLTIVSE 395
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RESULT 8
AAU31072
ID   AAU31072 standard; Protein; 315 AA.
XX
AC   AAU31072;
XX
DT   18-DEC-2001  (first entry)
XX
DE   Novel human secreted protein #1563.
XX
KW   Human; vaccination; gene therapy; nutritional supplement;
KW   stem cell proliferation; haematopoiesis; nerve tissue regeneration;
KW   immune suppression; immune stimulation; anti-inflammatory; leukaemia.
XX
OS   Homo sapiens.
XX
PN   WO200179449-A2.
XX
PD   25-OCT-2001.
XX
PF   16-APR-2001; 2001WO-US08656.
XX
PR   18-APR-2000; 2000US-0552929.
PR   26-JAN-2001; 2001US-0770160.
XX
PA   (HYSE-) HYSEQ INC.
XX
PI   Tang YT,  Liu C,  Drmanac RT;
XX
DR   WPI; 2001-611725/70.
XX
PT   Nucleic acids encoding a range of human polypeptides, useful in genetic
PT   vaccination, testing and therapy -
XX
PS   Claim 20; Page 399; 765pp; English.
XX
CC   The invention relates to novel human secreted polypeptides. The
CC   polypeptides and antibodies to the polypeptides are useful for
CC   determining the presence of or predisposition to a disease associated
CC   with altered levels of polypeptide. The polypeptides are also useful for
CC   identifying agents (agonists and antagonists) that bind to them. Cells
CC   expressing the proteins are useful for identifying a therapeutic agent
CC   for use in treatment of a pathology related to aberrant expression or
CC   physiological interactions of the polypeptide. Vectors comprising
CC   the nucleic acids encoding the polypeptides and cells genetically
CC   engineered to express them are also useful for producing the proteins.
CC   The proteins are useful in genetic vaccination, testing and
CC   therapy, and can be used as nutritional supplements. They may be used to
CC   increase stem cell proliferation; to regulate haematopoiesis; and in
CC   bone, cartilage, tendon  and/or nerve tissue growth or regeneration;
CC   immune suppression and/or stimulation; as anti-inflammatory agents; and
CC   in treatment of leukaemias. AAU29510-AAU33304 represent the amino acid
CC   sequences of novel human secreted proteins of the invention.
XX
SQ   Sequence   315 AA;
```

```
  Query Match             34.4%;  Score 99;  DB 22;  Length 315;
  Best Local Similarity   37.3%;  Pred. No. 0.00015;
  Matches   19;  Conservative   11;  Mismatches   21;  Indels    0;  Gaps    0;

Qy       6 LGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
           |  :|:   :    | || | ::|::| ||  :|  :|||  || : ||:|
Db      68 LSDYPSPDISPPIFRRGEKLRVISDEGGWWKAISLSTGRESYIPGICVARV 118
```

```
RESULT 9
AAY49420
ID   AAY49420 standard; Protein; 509 AA.
XX
AC   AAY49420;
XX
DT   13-MAR-2000  (first entry)
XX
DE   PKA substrate, Src-family protein.
XX
KW   Protein kinase A; PKA; PKA signaling pathway; phosphorylation; cancer;
KW   kinase substrate; immunosuppressive disorder; proliferative disease;
KW   HIV infection; AIDS; immunodeficiency; autoimmune disease;
KW   systemic lupus erythematosus; Src-family.
XX
OS   Homo sapiens.
XX
PN   WO9962315-A2.
XX
PD   02-DEC-1999.
XX
PF   27-MAY-1999;   99WO-GB01680.
XX
PR   27-MAY-1998;   98NO-0002419.
PR   30-DEC-1998;   98US-0114240.
XX
PA   (LAUR-) LAURAS AS.
PA   (JONE/) JONES E L.
XX
PI   Hansson V,  Levy FO,  Mustelin T,  Skalhegg BS,  Sundvold V,  Tasken K;
PI   Vang T,  Altman A,  Munshi A;
XX
DR   WPI; 2000-086801/07.
DR   N-PSDB; AAZ46491.
XX
PT   Altering the activity of protein kinase signaling pathways, used for
PT   treating immunosuppressive disorders, e.g. AIDS, proliferative
PT   disorders, e.g. cancers or autoimmune diseases  -
XX
PS   Claim 23; Page 95-96; 111pp; English.
XX
CC   The invention provides a novel method of altering the activity of the
CC   protein kinase A (PKA) signaling pathway in a cell that comprises
CC   altering the extent of phosphorylation of one or more PKA substrates, or
CC   kinase substrates downstream in the PKA signaling pathway. Pharmaceutical
CC   compositions containing a nucleic acid molecule that encodes a PKA
CC   substrate, or fragment, precursor or functionally equivalent variant,
CC   where the sequence is modified to alter its susceptibility to
CC   phosphorylation by PKA can be used for treating a disorder exhibiting
CC   abnormal PKA signaling activity, immunosuppressive disorders or
CC   proliferative diseases. They can be used for treating e.g. HIV
CC   infection, AIDS, common variable immunodeficiency or cancers. Conditions
CC   in which upregulation of the PKA pathway is required, such as autoimmune
CC   disease, e.g. systemic lupus erythematosus, may also be treated. The
CC   present sequence represents a PKA substrate, wherein the substrate is in
CC   the Src-family, preferably Lck, Fyn, Src, Yes, Fgr, Lyn, Hck Blk, Yrk,
CC   c-tkl, Fyk, Src-1 or Src-2.
XX
SQ   Sequence   509 AA;
```

```
  Query Match             33.3%;  Score 96;  DB 21;  Length 509;
  Best Local Similarity   38.5%;  Pred. No. 0.00068;
  Matches   20;  Conservative    8;  Mismatches   24;  Indels    0;  Gaps    0;

Qy       4 VALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAK 55
           :|| |:      :|    |||| |: : |:||   |  :|:|  ||   |||
Db      67 IALHSYEPSHDGDLGFEKGEPLRILEQSGEWWKAQSLTTGQEGFIPFNFVAK 118
```

```
RESULT 10
ABB57957
ID   ABB57957 standard; Protein; 517 AA.
```

```
XX
AC   ABB57957;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Drosophila melanogaster polypeptide SEQ ID NO 663.
XX
KW   Drosophila; developmental biology; cell signalling; insecticide;
KW   pharmaceutical.
XX
OS   Drosophila melanogaster.
XX
PN   WO200171042-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US09231.
XX
PR   23-MAR-2000; 2000US-191637P.
PR   11-JUL-2000; 2000US-0614150.
XX
PA   (PEKE ) PE CORP NY.
XX
PI   Venter JC,  Adams M,  Li PWD,  Myers EW;
XX
DR   WPI; 2001-656860/75.
DR   N-PSDB; ABL02060.
XX
PT   New isolated nucleic acid detection reagent for detecting 1000 or more
PT   genes from Drosophila and for elucidating cell signalling and cell-cell
PT   interactions -
XX
PS   Disclosure; SEQ ID NO 663; 21pp + Sequence Listing; English.
XX
CC   The invention relates to an isolated nucleic acid detection reagent
CC   capable of detecting 1000 or more genes from Drosophila. The invention is
CC   useful in developmental biology and in elucidating cell signalling and
CC   cell-cell interactions in higher eukaryotes for the development of
CC   insecticides, therapeutics and pharmaceutical drugs. The invention
CC   discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC   sequences (ABL01840-ABL16175) and the encoded proteins
CC   (ABB57737-ABB72072).
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence   517 AA;

  Query Match             31.8%;  Score 91.5;  DB 22;  Length 517;
  Best Local Similarity   42.6%;  Pred. No. 0.0027;
  Matches   23;  Conservative    9;  Mismatches   21;  Indels    1;  Gaps    1;

Qy       4 VALGSFPAGGPAELSLRLGEPLTIVSE-DGDWWTVLSEVSGREYNIPSVHVAKV 56
           |||  : |    :|| | || | |:::  ||||   |: :  |  ||| :|||:
Db      69 VALYDYDARTDEDLSFRKGEHLEILNDTQGDWWLARSKKTRSEGYIPSNYVAKL 122


RESULT 11
ABB84051
ID   ABB84051 standard; protein; 61 AA.
XX
AC   ABB84051;
XX
DT   04-SEP-2002  (first entry)
XX
DE   Human protein fragment capable of inactivating HIV Nef protein.
XX
KW   Nef protein; fusion protein; virucide; anti-HIV; accessory protein;
KW   pathogenicity; diagnosis; AIDS; human.
XX
OS   Homo sapiens.
XX
PN   DE10109532-C1.
XX
PD   13-JUN-2002.
XX
PF   28-FEB-2001; 2001DE-1009532.
XX
PR   28-FEB-2001; 2001DE-1009532.
XX
PA   (GEYE/) GEYER M.
PA   (FACK/) FACKLER O.
XX
PI   Geyer M;
XX
DR   WPI; 2002-418264/45.
XX
PT   New fusion protein that blocks Nef protein, useful for treatment or
PT   diagnosis of acquired immune deficiency syndrome, has high specificity
PT   and affinity  -
XX
PS   Claim 3; Page 8-9; 22pp; German.
XX
CC   This invention describes a novel fusion protein for blocking the Nef
CC   protein of human immune deficiency virus (HIV) which comprises: (i)
CC   protein domain 1 that binds to a di-leucine (LL) motif; (ii) a
CC   protein domain 2 that binds to a PxxP motif; and (iii) a polypeptide
CC   linker between protein domains 1 and 2. The products of the invention
CC   have virucide and anti-HIV activity and are capable of neutralising Nef,
CC   an accessory protein essential for pathogenicity of HIV-1. The fusion
CC   protein of the invention comprises the LL domain of the beta-subunit of
CC   the adapter-protein complex AP-1 and the PxxP binding SH3 domain of
CC   tyrosine kinase Hck, linked through a 60 amino acid peptide. The products
CC   of the invention are used for in vitro diagnosis of AIDS and for
CC   treatment of AIDS. The LL and PxxP motifs are specific for Nef, which,
CC   unlike HIV protease, has no human homologue, so the fusion protein (which
CC   binds Nef with very high affinity) should cause essentially no side
CC   effects. This sequence represents a human derived protein fragment used
CC   in the construction of the fusion protein of the invention and which
CC   contains a PXXP-motif binding domain useful to the invention.
XX
SQ   Sequence   61 AA;

  Query Match             31.2%;  Score 90;  DB 23;  Length 61;
  Best Local Similarity   35.8%;  Pred. No. 0.00028;
  Matches   19;  Conservative   12;  Mismatches   22;  Indels    0;  Gaps    0;

Qy       4 VALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
           |||  : |    :|| : |: : :: | |:||   |  : :|  ||| :||:|
Db       7 VALYDYEAIHHEDLSFQKGDQMVVLEESGEWWKARSLATRKEGYIPSNYVARV 59


RESULT 12
ABB84052
ID   ABB84052 standard; protein; 471 AA.
XX
AC   ABB84052;
XX
DT   04-SEP-2002  (first entry)
XX
DE   Rat/human fusion protein capable of inactivating HIV Nef protein.
XX
KW   Nef protein; fusion protein; virucide; anti-HIV; accessory protein;
KW   pathogenicity; diagnosis; AIDS; rat; human.
XX
OS   Rattus sp.
OS   Homo sapiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Region          1..349
FT                   /note= "Rat derived region"
FT   Region          427..471
FT                   /note= "Human derived region"
XX
PN   DE10109532-C1.
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XX
PD   13-JUN-2002.
XX
PF   28-FEB-2001; 2001DE-1009532.
XX
PR   28-FEB-2001; 2001DE-1009532.
XX
PA   (GEYE/) GEYER M.
PA   (FACK/) FACKLER O.
XX
PI   Geyer M;
XX
DR   WPI; 2002-418264/45.
XX
PT   New fusion protein that blocks Nef protein, useful for treatment or
PT   diagnosis of acquired immune deficiency syndrome, has high specificity
PT   and affinity -
XX
PS   Claim 4; Page 9-11; 22pp; German.
XX
CC   This invention describes a novel fusion protein for blocking the Nef
CC   protein of human immune deficiency virus (HIV) which comprises: (i)
CC   protein domain 1 that binds to a di-leucine (LL) motif; (ii) a
CC   protein domain 2 that binds to a PxxP motif; and (iii) a polypeptide
CC   linker between protein domains 1 and 2. The products of the invention
CC   have virucide and anti-HIV activity and are capable of neutralising Nef,
CC   an accessory protein essential for pathogenicity of HIV-1. The fusion
CC   protein of the invention comprises the LL domain of the beta-subunit of
CC   the adapter-protein complex AP-1 and the PxxP binding SH3 domain of
CC   tyrosine kinase Hck, linked through a 60 amino acid peptide. The products
CC   of the invention are used for in vitro diagnosis of AIDS and for
CC   treatment of AIDS. The LL and PxxP motifs are specific for Nef, which,
CC   unlike HIV protease, has no human homologue, so the fusion protein (which
CC   binds Nef with very high affinity) should cause essentially no side
CC   effects. This sequence represents a fusion protein composed of a rat
CC   protein fragment which contains a dileucine (LL) motif and a human
CC   protein fragment containing a PXXP-motif binding domain useful to the
CC   invention.
XX
SQ   Sequence   471 AA;

  Query Match             31.2%;  Score 90;  DB 23;  Length 471;
  Best Local Similarity   35.8%;  Pred. No. 0.0038;
  Matches   19;  Conservative   12;  Mismatches   22;  Indels    0;  Gaps    0;

Qy       4 VALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
           |||  : |    :|| : |: : :: | |:||   |  : :|  ||| :||:|
Db     417 VALYDYEAIHHEDLSFQKGDQMVVLEESGEWWKARSLATRKEGYIPSNYVARV 469


RESULT 13
AAB99332
ID   AAB99332 standard; Protein; 505 AA.
XX
AC   AAB99332;
XX
DT   23-AUG-2001  (first entry)
XX
DE   Human tyrosine kinase Hck protein sequence SEQ ID NO:11.
XX
KW   Human; tyrosine kinase Hck binding protein; tyrosine kinase; Hck;
KW   tumour lethal factor; tumour necrosis factor alpha; apoptosis; HSB-1;
KW   Hck signal transduction; human immunodeficiency virus; HIV infection;
KW   anticancer.
XX
OS   Homo sapiens.
XX
PN   WO200132869-A1.
XX
PD   10-MAY-2001.
XX
PF   26-OCT-2000; 2000WO-JP07500.
XX
PR   29-OCT-1999;  99JP-0309957.
XX
PA   (SSSE ) SSP CO LTD.
XX
PI   Taniyama T,  Narita T;
XX
DR   WPI; 2001-316440/33.
XX
PT   New proteins which bind to human tyrosine kinase Hck for promotion of
PT   apoptosis and for the elucidation of the mechanism of Hck signal
PT   transduction -
XX
PS   Example 1; Page 33-35; 45pp; Japanese.
XX
CC   The present invention describes a protein, designated HSB-1, which binds
CC   to human tyrosine kinase Hck. Also described are: (1) nucleic acids
CC   encoding the protein and its derivatives; (2) recombinant vectors
CC   containing the nucleic acids; and (3) host cells transformed by the
CC   vectors and expressing the protein. HSB-1 has cytostatic activity, binds
CC   tyrosine kinase, enhances tumour necrosis factor alpha and promotes
CC   apoptosis. HSB-1 proteins are used for the elucidation of the mechanism
CC   of Hck signal transduction and of the role of Hck in human
CC   immunodeficiency virus (HIV) infection. They can be used for the
CC   treatment of infections and other diseases with which Hck is associated.
CC   They promote the anticancer activity of tumour necrosis factor alpha.
CC   The present sequence represents the human tyrosine kinase Hck protein,
CC   which is used in an example from the present invention.
XX
SQ   Sequence   505 AA;

  Query Match             31.2%;  Score 90;  DB 22;  Length 505;
  Best Local Similarity   35.8%;  Pred. No. 0.0041;
  Matches   19;  Conservative   12;  Mismatches   22;  Indels    0;  Gaps    0;

Qy       4 VALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
           |||  : |    :|| : |: : :: | |:||   |  : :|  ||| :||:|
Db      63 VALYDYEAIHHEDLSFQKGDQMVVLEESGEWWKARSLATRKEGYIPSNYVARV 115


RESULT 14
ABB84055
ID   ABB84055 standard; protein; 513 AA.
XX
AC   ABB84055;
XX
DT   04-SEP-2002  (first entry)
XX
DE   Rat/human fusion protein capable of inactivating HIV Nef protein.
XX
KW   Nef protein; fusion protein; virucide; anti-HIV; accessory protein;
KW   pathogenicity; diagnosis; AIDS; rat; human.
XX
OS   Rattus sp.
OS   Homo sapiens.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   Region          1..349
FT                   /note= "Rat derived region"
FT   Region          407..426
FT                   /note= "human ubiquitination signal"
FT   Region          446..490
FT                   /note= "Human derived region"
FT   Region          491..513
FT                   /note= "Human farnesylation signal"
XX
PN   DE10109532-C1.
XX
PD   13-JUN-2002.
XX
PF   28-FEB-2001; 2001DE-1009532.
XX
PR   28-FEB-2001; 2001DE-1009532.
```

```
XX
PA   (GEYE/) GEYER M.
PA   (FACK/) FACKLER O.
XX
PI   Geyer M;
XX
DR   WPI; 2002-418264/45.
XX
PT   New fusion protein that blocks Nef protein, useful for treatment or
PT   diagnosis of acquired immune deficiency syndrome, has high specificity
PT   and affinity -
XX
PS   Claim 9; Page 11-13; 22pp; German.
XX
CC   This invention describes a novel fusion protein for blocking the Nef
CC   protein of human immune deficiency virus (HIV) which comprises: (i)
CC   protein domain 1 that binds to a di-leucine (LL) motif; (ii) a
CC   protein domain 2 that binds to a PxxP motif; and (iii) a polypeptide
CC   linker between protein domains 1 and 2. The products of the invention
CC   have virucide and anti-HIV activity and are capable of neutralising Nef,
CC   an accessory protein essential for pathogenicity of HIV-1. The fusion
CC   protein of the invention comprises the LL domain of the beta-subunit of
CC   the adapter-protein complex AP-1 and the PxxP binding SH3 domain of
CC   tyrosine kinase Hck, linked through a 60 amino acid peptide. The products
CC   of the invention are used for in vitro diagnosis of AIDS and for
CC   treatment of AIDS. The LL and PxxP motifs are specific for Nef, which,
CC   unlike HIV protease, has no human homologue, so the fusion protein (which
CC   binds Nef with very high affinity) should cause essentially no side
CC   effects. This sequence represents a fusion protein composed of a rat
CC   protein fragment which contains a dileucine (LL) motif and a human
CC   protein fragment containing a PXXP-motif binding domain, a farnesylation
CC   siganl and a ubiquitination signal useful to the invention.
XX
SQ   Sequence   513 AA;

  Query Match             31.2%;  Score 90;  DB 23;  Length 513;
  Best Local Similarity   35.8%;  Pred. No. 0.0042;
  Matches   19;  Conservative   12;  Mismatches   22;  Indels    0;  Gaps    0;

Qy       4 VALGSFPAGGPAELSLRLGEPLTIVSEDGDWWTVLSEVSGREYNIPSVHVAKV 56
           |||  : |    :|| : |: : :: | |:||   |  : :|  ||| :||:|
Db     436 VALYDYEAIHHEDLSFQKGDQMVVLEESGEWWKARSLATRKEGYIPSNYVARV 488


RESULT 15
ABB58710
ID   ABB58710 standard; Protein; 2415 AA.
XX
AC   ABB58710;
XX
DT   26-MAR-2002  (first entry)
XX
DE   Drosophila melanogaster polypeptide SEQ ID NO 2922.
XX
KW   Drosophila; developmental biology; cell signalling; insecticide;
KW   pharmaceutical.
XX
OS   Drosophila melanogaster.
XX
PN   WO200171042-A2.
XX
PD   27-SEP-2001.
XX
PF   23-MAR-2001; 2001WO-US09231.
XX
PR   23-MAR-2000; 2000US-191637P.
PR   11-JUL-2000; 2000US-0614150.
XX
PA   (PEKE ) PE CORP NY.
XX
PI   Venter JC,  Adams M,  Li PWD,  Myers EW;
XX
DR   WPI; 2001-656860/75.
DR   N-PSDB; ABL02813.
XX
PT   New isolated nucleic acid detection reagent for detecting 1000 or more
PT   genes from Drosophila and for elucidating cell signalling and cell-cell
PT   interactions -
XX
PS   Disclosure; SEQ ID NO 2922; 21pp + Sequence Listing; English.
XX
CC   The invention relates to an isolated nucleic acid detection reagent
CC   capable of detecting 1000 or more genes from Drosophila. The invention is
CC   useful in developmental biology and in elucidating cell signalling and
CC   cell-cell interactions in higher eukaryotes for the development of
CC   insecticides, therapeutics and pharmaceutical drugs. The invention
CC   discloses genomic DNA sequences (ABL16176-ABL30511), expressed DNA
CC   sequences (ABL01840-ABL16175) and the encoded proteins
CC   (ABB57737-ABB72072).
CC   The sequence data for this patent did not form part of the printed
CC   specification, but was obtained in electronic format directly from WIPO
CC   at ftp.wipo.int/pub/published_pct_sequences.
XX
SQ   Sequence   2415 AA;

  Query Match             31.1%;  Score 89.5;  DB 22;  Length 2415;
  Best Local Similarity   35.2%;  Pred. No. 0.036;
  Matches   19;  Conservative   15;  Mismatches   17;  Indels    3;  Gaps    2;

Qy       4 VALGSFPAGGPAELSLRLGEPLTIV-SEDGDWWTVLSEVSGREYNIPSVHVAKV 56
           |||  :    | |:|:: |: ||:: | : ||| |  ||: |:  :|: :: |:
Db     976 VALYDYTEKSPREVSMKKGDVLTLLNSNNKDWWKV--EVNDRQGFVPAAYIKKI 1027


Search completed: March 24, 2003, 15:48:36
Job time : 12.8788 secs
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